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IS 1683 (1994): Barytes for rubber industry [PCD 13: Rubber and Rubber Products]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

रबड़ उद्योग के लिए बैराइट्स – विशिष्ट

(दूसरा पुनरीक्षण)

Indian Standard

**BARYTES FOR RUBBER INDUSTRY —
SPECIFICATION**

(Second Revision)

UDC 622.368.92 : 678.4.04

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**BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BHADUR SHAH ZAFAR MARG
NEW DELHI 110002**

FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Rubber Products Sectional Committee, had been approved by the Petroleum, Coal and Related Products Division Council.

This standard was first revised in 1973 when the requirement for matter soluble in water was incorporated and the methods of tests were deleted from the standard because a separate standard for methods of sampling and test for rubber compounding ingredients was prepared. In the present revision the requirements of sieve residue (through 75 micron), relative density, manganese and copper contents have been modified and a new requirement of loss on ignition has been included.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

BARYTES FOR RUBBER INDUSTRY — SPECIFICATION

(Second Revision)

1 SCOPE

This standard prescribes the requirements and methods of sampling and test for barytes intended for use in the rubber industry.

2 NORMATIVE REFERENCES

The following Indian Standards contain provision which through reference in this text, constitute provisions of this standard. At the time of publication the editions indicated were valid. All standards are subject to revision and parties to agreements based on the standard are encouraged to investigate the possibility of applying the most recent editions of the standard indicated below:

IS No.	Title
1070 : 1992	Reagent grade water (<i>third revision</i>)
7086 (Part 1) : 1973	Methods of sampling and test for rubber compounding ingredients, Part 1

3 REQUIREMENTS

3.1 Description

The material shall be in the form of white heavy powder.

3.2 The material shall also comply with the requirements given in Table 1.

4 PACKING AND MARKING

4.1 Packing

The material shall be packed as agreed to between the purchaser and the supplier.

4.2 Marking

4.2.1 Each package shall be marked with the following:

- a) Name of the material;
- b) Indication of the source of manufacture;
- c) Net mass of the material;
- d) Month and year of the manufacture; and
- e) Lot or batch number.

4.2.2 The package may also be marked with the Standard Mark.

4.2.3 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Table 1 Requirements of Barytes for Rubber Industry
(*Clauses 3.2, 5.3.1.1 and 6.1*)

Sl No.	Characteristic	Requirement	Method of Test Ref to Cl No in IS 7086 (Part) 1973 ¶
(1)	(2)	(3)	(4)
i)	Colour	Close match to the approved sample on visual examination	—
ii)	Sieve residue, percent by mass, <i>Max</i> : a) through 75-micron IS sieve b) through 150-micron IS sieve	0.3 0.01	3
iii)	Relative density at 27°C/27°C	4.2 to 4.6	4
iv)	pH	6 to 8	5
v)	Moisture content, percent by mass, <i>Max</i>	0.5	7
vi)	Matter soluble in water, percent by mass, <i>Max</i>	0.5	8
vii)	Matter insoluble in hydrochloric acid, percent by mass, <i>Min</i>	98	9
viii)	Manganese as (Mn), percent by mass, <i>Max</i>	0.004	11
ix)	Copper as (Cu), percent by mass, <i>Max</i>	0.002	12
x)	Iron	To satisfy requirement of test	13
xi)	Loss on ignition, percent by mass, <i>Max</i>	5.0	10

5 SAMPLING

5.1 Representative samples shall be drawn as prescribed in 15 of IS 7086 (Part 1) : 1973.

5.2 Number of Tests

5.2.1 Tests for the determination of manganese copper shall be conducted on individual samples.

5.2.2 Tests for all other characteristics shall be conducted on a composite sample.

5.3 Criteria for Conformity

5.3.1 For Individual Samples

5.3.1.1 Copper

Each individual test result shall satisfy the requirement of the specification as given in Table 1.

5.3.1.2 Manganese

The mean and range of test results for manganese shall be calculated as follows:

$$\text{Mean } (X) = \frac{\text{The sum of test results}}{\text{Number of test results}}$$

Mean (R) = The difference between the maximum and the minimum value of the test results.

The lot shall be deemed to have satisfied the requirements of the specification, if $X + 0.6 R < 0.005$.

5.3.2 For Composite Sample

In respect of all other characteristics, the lot shall be considered as conforming to the specification, if the composite sample satisfies each of these requirements.

6 TEST METHODS

6.1 The test shall be carried out according to the standards prescribed in col 4 of the Table 1.

6.2 Quality of Reagent

Unless specified otherwise, 'pure chemicals' and distilled water (see IS 1070 : 1992) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

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Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition.

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Amendments Issued Since Publication

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